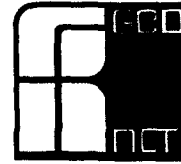


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GeoNet Limited L.P.

April 18, 1997

The Honorable Reed E. Hundt  
Chairman  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, DC 20554

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APR 23 1997

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Re: CC Docket # 96-45  
Federal/State Joint Board on Universal Service  
Recommended Decision

Dear Chairman Hundt:

As a follow up to our letter of April 8, 1997, GeoNet Limited, L.P. hereby submits comments on the matters of universal service to the Internet and access charges on Internet Service Providers (ISPs). We would like to express our appreciation for the opportunity to share GeoNet's experience related to this matter with the Commission.

GeoNet is a developer of enhanced telecommunications services and has developed a proposed solution to the problem of network congestion resulting from subscriber access to the Internet. We have had several meetings with Incumbent Local Exchange Carriers (ILECs), ISPs, and manufacturers of telecommunications equipment. We believe that what we have learned from those meetings bears directly upon the the matters currently being considered in Docket 96-45.

First, there is the matter of universal access to the Internet. In the discussions with the ILECs, we were told that the ILECs plan to implement overlay data networks for Internet calls and that the subscriber calls would be diverted by the local switch to those overlay networks. It is GeoNet's understanding, resulting from GeoNet's meetings with the ILECs, that these new overlay networks would be implemented first in the metropolitan areas and later in the remaining areas. Clearly, this would result in a period where a superior class of service would exist for metropolitan areas compared to the remainder of the country. The track record of the ILECs in implementing ISDN and AIN is evidence that this period could be a decade or more.

Second, there is the matter of access charges which the ILECs have requested to be imposed on ISPs. GeoNet believes that the capital expenses for the overlay data networks which are being planned by the ILECs are not necessary to solve the congestion problem. The solution developed by GeoNet is evidence of that fact. Therefore, those capital expenses should not be used as part of the justification for ISP access charges.

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The Honorable Reed E. Hundt

April 17, 1997

Page 2

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We thank you for the opportunity to share our experience on these matters with the commission.

Respectfully,  
for GeoNet Limited, L.P.



Don Berteau

Vice President, GeoSync Corporation  
General Partner, GeoNet Limited, L.P.

cc: Regina M. Keeney, Chief  
Common Carrier Bureau  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, DC 20554

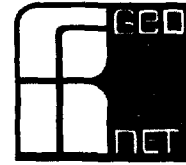
Michael Nelson  
Office of Policy Planning, Common Carrier Bureau  
Federal Communications Commission

William Kennard  
General Counsel  
Federal Communications Commission

Catherine J. K. Sandoval, Director  
Office of Communications Business Opportunities  
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GeoNet Limited L.P.

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April 8, 1997

The Honorable Reed E. Hundt  
Chairman  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, DC 20554

Dear Chairman Hundt:

On behalf of GeoNet Limited, L. P. , I am writing to offer GeoNet's comments on a matter of national importance which may be under consideration by the Commission. We are not aware of a specific docket covering the matter, although the matter involves related issues being considered under several Common Carrier Bureau dockets. That matter is the congestion of the public network resulting from Internet user access.

Since GeoNet is a very small organization, it is difficult for us to participate actively in the Commission's proceedings. However, since we have experience which directly relates to the matter, we feel an obligation to participate in some way. We have prepared comments on the matter which are attached to this letter.

GeoNet's experience which relates to the matter results from our business of developing enhanced telecommunications services. We evaluated technology that we have developed for management of enterprise data networks to see if that technology could provide a solution to the Internet access problem. The purpose of this letter is to bring to your attention what we learned from our discussions with Internet Service Providers, Incumbent Local Exchange Carriers, and manufacturers of telecommunications equipment. We hope that the attached comments serve that end.

We understand that the recently formed Office of Communications Business Opportunities is intended to assist small organizations. We would appreciate any assistance that office might provide, giving direction to GeoNet as to how to participate.

The Honorable Reed E. Hundt

April 8, 1997

Page 2

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We thank you for your attention.

Respectfully,  
for GeoNet Limited, L.P.



Don Berteau  
Vice President, GeoSync Corporation  
General Partner, GeoNet Limited, L.P.

cc: Catherine J. K. Sandoval, Director  
Office of Communications Business Opportunities  
Federal Communications Commission  
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**APR 23 1997**

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**To the Chairman  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

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**Attachment to the letter to the Chairman**

**On the Matter of  
Public Network Congestion  
resulting From Internet Usage**

**SUPPLEMENTARY COMMENTS**

**C. Donald Berteau**

**c/o The Netanya Group  
1069 Main Street  
Sebastian, FL 32958**

**Vice President, GeoSync Corporation  
General Partner, GeoNet Limited, L.P.**

**acting on behalf of GeoNet Limited, L.P.**

**DATE: April 8, 1997**

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**To the Chairman  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

**Comments on the Matter of Network Congestion  
Resulting from Internet Usage**

**I. INTRODUCTION**

Access to the Internet is usually accomplished by subscribing to an Internet access service provided by an organization called an Internet Service Provider (ISP). The ISP provides the network interface and computer service functions to enable the subscriber (user) to establish a connection to the Internet and to request and receive information from sites which are a part of the Internet.

The rapidly increasing use and popularity of the Internet has created a problem in the telecommunications network. The telecommunications infrastructure is not engineered for the long holding times of telephone calls which interconnect the users to the ISP. Those long holding times tie up telephone subscriber lines, central office switch resources, and network trunk lines for durations which are many times the average durations for which the infrastructure was designed. According to industry reports, the result is a degradation of service to other telephone system users caused by the increasing volume of Internet access calls.

Some solutions have been recommended which would require a complete new network, overlaid over the present telephone network, to handle Internet access calls separately from other telephone calls. Such solutions would require a large capital investment in additional new telecommunications network infrastructure.

## **II. BACKGROUND**

GeoNet is a developer of enhanced telecommunications services. GeoNet's first products were directed toward the management of enterprise data networks using the full capabilities of the Intelligent Network, out-of-band signalling, and bandwidth on demand. As a spinoff of those developments, GeoNet has begun the development of products which will provide a solution to the problem of public network congestion resulting from Internet usage.

GeoNet has met with several potential business partners to discuss the technical feasibility and value proposition for its proposed solution to the Internet congestion problem. The prospective business partners included Incumbent Local Exchange Carriers (ILECs), Internet Service Providers (ISPs), and suppliers of telecommunications switching and signalling equipment (vendors). In all cases, the potential business partners agreed that GeoNet's solution is technically feasible. Other conclusions GeoNet has formed as a result of the meetings are discussed later in this document.

## **III. GEONET PROPOSES A SOLUTION TO THE CONGESTION PROBLEM**

### **ISP Access Manager (patent pending)**

GeoNet's proposed solution employs existing technologies, especially the Advanced Intelligent Network (AIN) and the Integrated Services Digital Network (ISDN), and does not require either a new overlay data network or new network elements to be developed or deployed by ILEC's. The key element of the GeoNet solution is the ISP Access Manager. It is anticipated that the ISP Access Manager will be a network element which is owned by ISPs, and which is connected to the ILEC network through a Signalling System 7 (SS7) interface.

It is not the purpose of this document to describe the operation of the ISP Access Manager. Let it suffice to say that the ISP Access Manager uses the AIN and the ISDN to effectively make Internet calls a series of short duration calls instead of one long duration call.

GeoNet's value proposition states that the ISP gains by reducing equipment costs for server and access port hardware and by increasing revenues for selling ISDN lines, the ILEC gains by solving the network congestion without incurring large capital expenditures for new infrastructure, and the user gains from the availability of higher speed access at an attractive price.



#### **IV. THE SOLUTIONS PROPOSED BY THE CARRIERS .**

The solutions which have been proposed by many consultants, the carriers, and the telecommunications equipment manufacturers appear to involve the deployment of a new overlay network for Internet calls and equipment at each central office to divert the Internet data calls away from the voice network to the new overlay network.

Such solutions appear to require a very large capital expenditure by the ILECs. Will the Internet access subscribers ultimately pay for the overlay network deployment in usage charges? Will the overlay network deployment be used as the justification for a renewed effort by the ILECs to get access charges from the ISPs?

As a result of discussions with ILECs, GeoNet has concluded that the ILECs intend to deploy the proposed solutions in large metropolitan areas first and in other areas at some later date. If such is the case, quality access to the Internet would only be available to users in the large metropolitan areas until deployment of the proposed solutions is justified in the other areas.

#### **V. RESPONSE OF THE INDUSTRY TO THE GEONET SOLUTION**

GeoNet has had several discussions with ISPs, ILECs, and vendors in which GeoNet has proposed its alternate solution. In all of the meetings, GeoNet has verified that its solution is feasible, is consistent with Intelligent Network design goals and the functional capabilities of the AIN, and could be implemented more quickly than the other proposed solutions. The ILECs appear to be committed to solutions which will require a special overlay network.

Several objections were raised in the above discussions (different ILECs had different objections). Those objections include:

- ILECs have already begun deployment of an overlay data network for Internet data calls.
- ILECs do not have the technical and business planning resources sufficient to review alternative solutions to the congestion problem (other than the overlay solution which they are already pursuing).
- ILECs don't intend to allow ISPs access to SS7 on an equal basis to their own SS7 network elements.
- ISDN is supply limited in that ILECs cannot keep up with demand even now and GeoNet's solution would create more demand for ISDN.
- ILECs would rather wait and solve the problem with the new xDSL technologies, rather than encourage an ISDN based solution in the interim.

## **VI. SUMMARY**

**Public network congestion resulting from the growth of Internet access is a real and growing problem facing the telecommunications industry. The solutions proposed involve deployment of an overlay data network which will likely require large capital expenditures. GeoNet has proposed a solution which would not require such large capital expenditures.**

**The incumbent local exchange companies are in the process of determining a course of action to resolve the congestion problem. The solutions being considered may result in two levels of service; quality service for users in large metropolitan areas and second-class service for users outside of those areas. The solutions may be expensive; giving justification for ISP access charges or higher rates for Internet access. There are other solutions; GeoNet's proposed solution is evidence of that fact.**

**There is a clear public interest in what course of action is taken by the service providers to solve the Internet congestion problem. The problem is not limited to one state or region, but rather a national matter involving issues already being reviewed by the Commission. Those issues include ISP access charges, equal access for enhanced service providers, and AIN access. For that reason, it is important that the Commission provide fundamental guidelines by which all viable solutions to the congestion problem can be measured.**